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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,482	07/31/2000	Franz Josef Brocker	50487	4024

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EXAMINER	
DANG, THUAN D	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/629,482	BROCKER ET AL.	
	Examiner	Art Unit	
	Thuan D. Dang	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *1-10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, the "passing step" is indefinite due to the recitation of the limitation "without substantial change in the degree of the dispersion of said reaction fluid" since it is unclear the change in the degree of dispersion is applied thru the **entire** the catalyst bed or just in the connection path between the "generating zone" the reactor.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-16 are rejected under 35 U.S.C. 103(a) as obvious over Arganbright et al (4,950,834).

Arganbright discloses a process of reacting between propylene and benzene in the presence of a catalyst substantially the same as the applicant's claimed catalyst in an isothermal reactor having a wall contacted with the surrounding air (the abstract; the drawings; column 1, lines 8-66; col. 3, lines 1, lines 1-60; col. 5, line 14 thru col. 6, line 35).

As disclosed on column 3, line 28, benzene in the reactor is boiling (a liquid form).

Arganbright discloses that propylene is the most volatile component in the reaction (col. 8, lines 3-4. Arganbright also discloses that the reaction includes both vapor and liquid (col. 8, lines 52-55). Therefore, propylene must inherently be in the form of gas before the reaction.

On column 7, lines 24-34, Arganbright discloses that the benzene and others flow down to the bottom of the Omega sieve section to the Y sieve section. In figure 1 and 2, the examiner

has recognized that gas propylene stream 1 must be dispersed into this flowing down benzene stream before the mixture of benzene and propylene reacted further in the Y sieve.

Arganbright does not disclose that (1) the mixture of benzene and propylene does not substantially change in the degree of dispersion thru the reactor (Y sieve section) and (2) using a cooling fluid medium for delivering the heat away from the reactor.

However, it is expected that the dispersion would not be change in the Y sieve section of the Arganbright process since the catalyst bed of the Arganbright reactor is made by the same material as the claimed reactor (col. 5, line 14 thru col. 6, line 55).

It is expected that the heat of the reaction will be transfer from the wall of the reactor via the surrounding air.

However, in the case that the reaction room is too hot, it would have been obvious to one having oridinary skill in the art at the time the invention was made to have modified the Arganbright process by employing air conditioners to cool down the room to arrive at the applicants' claimed process to avoid the reaction room is too hot.

A recycle of benzene can be found in figures.

Temperature and pressure can be found on column 8, lines 42-46.

Arganbright appears to be silent as to the superficial liquid/gas velocity. However, these parameters depend on the size of the reactor and selected conversion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Arganbright process by selecting appropriate velocities of gas/liquid to operate the process since it is expected that using any superficial liquid/gas velocity would yield similar results.

Response to Arguments

Applicant's arguments filed 8/12/2004 have been fully considered but they are not persuasive.

The argument that as clearly defined in claim 1, lines 21-27, the feed stream line (7) which routes the reaction fluid from dispersing element (6) to the reactor inlet (31,41) has to be sufficiently short so that of the degree of the dispersion of the reaction fluid does not substantially change in the course of the passage through the feed line, now in claim 11 is not persuasive since applicants does not claim using any dispersing element, does not claim using a short reactor inlet and how short the inlet should be.

The argument that the present invention proposed the use of a catalyst-coated metal fabric. See on column 5, lines 20-22 and 55-57, Arganbright discloses that the molecular sieve can be enclosed in screen wire which is knitted. Clearly, sieves must be on the knitted wire (coated). Therefore, there is no difference between the catalyst bed of the Arganbright reactor and the catalyst used in the claimed process.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 571-272-1445. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuan D. Dang
Primary Examiner
Art Unit 1764

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June 30, 2006